Chemical Effect of Electric Current

Application Based Questions

Q.1. *Fill in the blanks*:

Directions: *Complete the following statements with an appropriate word / term to be filled in the blank space(s).*

1. Temporary, Soft iron, Consumer, Decomposition, Electroplating

(a) During electrolysis, chemical compounds undergo _____.

(b) Electricity comes into the home through a _____ unit

(c) Most electromagnets have _____ cores

(d) Putting a thin layer of protective metal on an object is called _____.

(e) Electromagnets are _____ magnets which can easily be switched on and off.

Q.2. *Multiple choice questions*:

Directions: *Read the following questions and choose the answer that best answer the questions.*

1. When an atom loses an electron

(a) Atom acquires negative charge.

(b) Atom acquires positive charge.

(c) Electron acquires positive charge.

(d) The algebric sum of charge present inside an atom remains same.

2. Charge flows between two ends of a conductor when

(a) Equal and same type of charges are present at the two ends.

(b) Different electric potentials exist at the two ends of a conductor.

(c) The potential difference between the ends is zero.

(d) Same electric potential is present at the two ends.

3. Metals are good conductors because

(a) Outer electrons are loosely bound to the atom.

(b) Outer electrons are strongly bound to the atom.

(c) Inner electrons are loosely bound to the atom.

(d) Protons can detach from the nucleus and conduct electricity.

4. Which of the following statements is correct?

(a) A negatively charged particle has higher electric potential than a positively charged particle.

(b) Charge flows only through negative charge carriers like electrons.

(c) The randomly moving electrons in a metal wire will start moving in a particular direction when a potential difference is applied across it.

(d) During electrolysis, charge flows through electrolyte solution via electrons.

5. _____ present in the lemon juice acts as electrolyte.

(a) Nitric acid (b) Sulphuric acid (c) Citric acid (d) Hydrochloric acid

6. Dilute sulphuric acid splits into

(a) Oxygen ions/hydrogen ions and sulphur ions.

(b) Hydrogen ions, oxygen ion and sulphate ions.

(c) Hydrogen ions and sulphate ions.

(d) Oxygen ions and hydrogen ions.

7. The common dry cell produces a voltage of

(a) 60V (b) 1.5V (c) 3V (d) 30V

Q.3. *Subjective questions*:

1. Does distilled water conduct electricity? What happen when we dissolve a pinch of common salt in distilled water?

Ans. …….

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2. (i) What is the most common industrial applications of chemical effects of electric current?

(ii) When a body is called electrically charged?

Ans. ……

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3. In an electric circuit 7 A flows for 1 hour. Find the amount of charge that has passed through the circuit.

Ans. ……

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4. An electric current of 5 A flows through a circuit. Find the number of electrons that would pass through the circuit m 10 minutes.

Ans. ……

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5. How would you find out whether the given liquid is a good conductor or poor conductor of electricity?

Ans. ……

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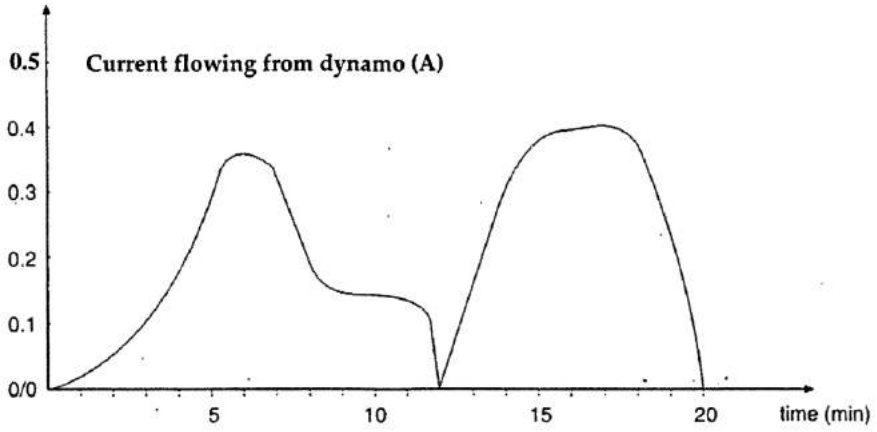
6. Complete the table below about the electrolysis of various chemical substances.

Chemical substance	**Product at terminals**	
	Negative terminals	**Positive terminals**
_____	Hydrogen gas	Oxygen gas
Molten calcium bromide	_____	_____
_____ Solution	Deposited lead	Dissolves lead

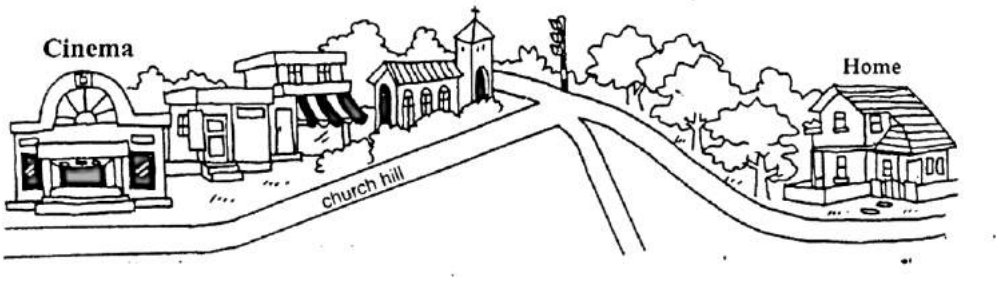
7. Complete this table:

Electrical		**Unit**	
Name	Symbol	Name	Symbol
_____	R	Ohm	_____
Current	I	_____	A
_____	V	_____	V

8. Study the given graph. The graph shows how the current flowing from a bicycle dynamo changed during a journey, home from the cinema.



Now study the picture. Picture shows the journey, home from cinema.



(i) Why did the current start to increase gradually till about 5 minutes?

(ii) Why did the current become zero at the 12th minute?

(iii) Why was the current highest during last the part of the journey?

Ans. ……

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9. Identify the type of cells in the examples given primary or secondary.

S.N.	Name of cell	Type of cell
1.	Lead-acid battery	_____
2.	Voltaic cell	_____
3.	Button cell	_____
4.	Dry cell	_____
5.	Leclanche cell	_____
6.	Bichromate cell	_____